

## 128. *Oxyphyllia*, a New Genus of Hexacorals.\*

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*Echinopora*, *Oxypora* and *Mycedium* are three very similar genera, and several different reef corals have hitherto been confusedly assigned to them, while their respective genotype are *Echinopora lamellosa* (Esper), *Oxypora lacera* (Verrill), and *Mycedium elephantotus* (Pallas). Good specimens of all these genotype species being fortunately represented in our collection, their structural details have recently been fully studied in comparison with the respective original description and figures of them.<sup>1)</sup>

In several early reports on reef corals by Yabe and Sugiyama the generic name *Echinophyllia* was applied to certain reef corals in a similar explanate growth from the southern coasts of Japan. *Echinophyllia* was proposed by Klunzinger in 1878 to replace Verrill's *Trachypora*,<sup>2)</sup> a preoccupied name, without knowing that another name *Oxypora* was already instituted for the same purpose by Saville-Kent<sup>3)</sup> in 1871; *Trachypora* and *Echinophyllia* must, therefore, give way to *Oxypora*.

There are distinguished two distinct forms among the Japanese corals once referred to "*Echinophyllia*," both forms are also distant from the typical *Oxypora*. In one type, the large calices arranged in concentric rows around a larger central calice, with subequal minute dentations on the border of septa makes it quite identical with *Physophyllia ayleni* Wells<sup>4)</sup> from Japan. The other type has smaller calices and bear septa and septocostae lacerately lobed or strongly dentate on upper border, this form coincided with in all respects, *Madrepora aspera* Ellis and Solander.<sup>5)</sup>

*Oxypora* is characterized in its coarsely costate base, strongly spinulate septal and septocostal borders on both upper and lower surface of its corallum, and more particularly in its slit-like pores at its marginal part. Thus, in such features, the above mentioned two forms

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1) While studying the reef corals and coral reefs of the Palau Islands, Eguchi found thin explanate colonies of reef corals luxuriantly growing in the quiet water of Iwayama-wan almost enclosed between the island Corôru and Oropusyakaru: this particular assemblage of coral colonies belonging to several distinct genera and species, but in a more or less similar growth was called by him the "*Echinopora lamellosa* association" after the name of its most dominant member. The other prevailing members of this association are *Oxypora contorta* Quelch, *O. lacera* Verrill, *Mycedium elephantotus* (Pallas) (*M. okeni* M. Edw. et J. H.), *M. tenuicostatum* Verrill and *M. tubifex* (Dana): these are all little known species, while *Echinopora lamellosa* is a rather familiar form.

2) Verrill, A. E.: Bull. Mus. Comp. Zool. Harvard, Vol. 1, No. 3, p. 53, 1864.

3) Saville-Kent, W.: Proc. Zool. Soc., 1871, p. 283.

4) Wells, W.: Ann. Mag. Nat. Hist., Ser. 10, Vol. 15, p. 339, 1935.

5) Ellis, J. and D. Solander: Zoophytes, etc., London, 1776, p. 156, pl. 39.

are quite distinct. "*Madrepora*" *aspera* has hitherto been included into one or the other genera enumerated above, but since it diverges from them in one or other essential features, and since there is no known genus fitted for its reception, the institution of a new one seems to be necessary.

### Genus *Oxyphyllia*, nov.

Genotype; *Madrepora aspera* Ellis and Solander, 1776.

Diagnosis; Corallum explanate, thin, attached by a short stalk to substratum in young stage and by rather broad base in older; below subequally costate, without strong dentations, above with scattered calices, which are usually destitute of walls, but sometimes with thick pseudo-walls. Septocostae and septa strongly and lacerately lobed or dentated, with strongest lobes around the calicular centre. Columella trabecular and spongy. Dissepiments well developed. Corallum solid in texture and not perforated.

Dana, Milne Edwards and J. Haime and Duncan thought *Madrepora aspera* to belong to *Echinopora* and Verrill to his *Trachypora*; the latter treatment was followed by Klunzinger and Gerth.

In the general features of the corallum and particularly of its surface, *Oxyphyllia* resembles superficially *Oxypora*, but is easily distinguished from it by barely costated base and the absence of slit-like pores characterizing *Oxypora*. In the former feature *Oxyphyllia* is allied with *Mycedium*, *Echinopora* and *Physophyllia*, but differs from them in the following respects: *Mycedium* having more or less naked septocostae and inclined calices, *Echinopora* smaller spines and smaller calices surrounded by well developed circular walls, and *Physophyllia* larger calices, larger interseptal loculi, subentire septal and septocostal border and characteristic dissepimental wall.

*Oxyphyllia* contains besides the genotype, the following two varieties and a questionable species (*Mycedium explanata* Verrill).

*Oxyphyllia aspera* var. *tosaensis* nov. (fig. 3, 4). Distinguished by its smaller and inclined calices, circumscribed by walls. Loc. Misaki, Tosa, and Udo, Hyuga.

*Oxypora aspera* var. *sugiyamai* nov. Resembling the former in the shape and inclination of calices, which are however, much larger and stronger. Corallum usually convex, calices at the central part of corallum much elevated (20 mm. high); septa and their spines stronger; linked with the typical form by intermediate forms. Loc. Yura-wan, Kii.

### Explanation of figures (Nat. Size).

1, 2, *Oxyphyllia aspera* (Ellis and Solander), Institute of Geology and Palaeontology, Tôhoku Imp. Univ. Reg. No. 40284, Loc. Oura, Minaminaka-gun, Miyazaki-ken (Hyuga). 3, 4, *Oxyphyllia aspera* var. *tosaensis* var. nov. Reg. No. 40313, Loc. Susaki, Takaoka-gun, Koti-ken (Tosa). 5, 6, *Physophyllia ayleni* Wells, Reg. No. 57474, Loc. Near Hamasima, Toba-gun, Mie-ken (Ise). 7, 8, *Mycedium elephantotus* (Pallas), Reg. No. 57414, Loc. Iwayama-wan, Palau Islands. 9, 10, *Oxypora lacera* (Verrill), Reg. No. 57402, Loc. Iwayama-wan, Palau Islands. 1, 4, 5, 7, 9, Surface; 2, 3, 6, 8, 10, Base.

